

Notice of Allowability

Application No.

09/584,609

Examiner

Mohammad A. Siddiqi

Applicant(s)

UCEDA-SOSA ET AL.

Art Unit

2154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 03/07/2005.
2. ☒ The allowed claim(s) is/are 1,3,5,8-12,14-18 and 20-24(Rearranged claims are 1-18).
3. ☒ The drawings filed on 31 May 2000 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


JOHN FOLLANSBEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Kevin P. Radigan on 05/27/2005.

The application has been amended as follows:

- A) Claim 8, line 1 replace "claim 7" with -claim 1--.
- B) Claim 14, line 1 replace "claim 13" with -claim 3--.
- C) Claim 20, line 1 replace "claim 19" with -claim 5--.

Conclusion

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad A. Siddiqi whose telephone number is (571) 272-3976. The examiner can normally be reached on Monday -Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A. Follansbee can be reached on (571) 272-3964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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JOHN FOLLANSBEE
SUPERVISORY PATENT EXAMINER
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"Method, System And Program Products For Modifying Globally Stored Tables Of A Client-Server Environment," Uceda-Sosa et al., Serial No. 09/583,585, filed May 31, 2000;

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Cmcd. and U.S. Patent 6721742

"Method, System And Program Products For Concurrent Write Access To A Global Data Repository," Uceda-Sosa et al., Serial No. 09/584,523, filed May 31, 2000.

Now U.S. Patent
6681225

In the Claims:

Please replace claims 1, 3 and 5 as follows:

1. A method of managing locking of resources of a global data repository of a distributed computing environment, said method comprising:

issuing a request, via a thread of a multithreaded client application of said distributed computing environment, for a lock of one or more resources of said global data repository; and

obtaining said lock for said thread independent of a threading model of an operating system of said distributed computing environment.

3. A system of managing locking of resources of a global data repository of a distributed computing environment, said system comprising:

means for issuing a request, via a thread of a multithreaded client application of said distributed computing environment, for a lock of one or more resources of said distributed global data repository; and

means for obtaining said lock for said thread independent of a threading model of an operating system of said distributed computing environment.

5. At least one program storage device readable by a machine, tangibly embodying at least one program of instructions executable by the machine to perform a

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virtual context that a library uses in order to work with a server.

It is possible to augment the number of communication threads in order to multiplex over several connections.

5 However, in this embodiment, this number is static, and does not depend on the number of connections currently active. A connection to a server is active, while there is at least one mount point to that server from any of the local trees of the client application. A mount point is closed through
10 an unmount operation on the mount point directory.

Each local tree can be globally accessed by any thread in the client application. Each tree keeps the state of the communication between the client and the server, which includes information about the data repository resources
15 (e.g., tables and directories) accessed and the resources reserved by the local tree. That is, a set of tables is explicitly locked in the server on behalf of a local tree through a lockTables operation. One example of a lockTables operation is described in detail in U.S. Patent Application
20 entitled "Method, System And Program Products For Concurrent Write Access To A Global Data Repository," Uceda-Sosa et al., (~~Docket No. POU9-2000-0012-US1~~, Serial No.

09/584523, filed May 31, 2000, which is hereby incorporated by reference in its entirety. *Now U.S. Patent 6681225*

25 The set of tables locked, as a result of such an operation, is called a lock set. The return value of a lockTables invocation is a lockId, which can be employed by

09/583677, filed 05/31/2000, which is hereby
incorporated herein by reference in its entirety.

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The nodes of a cluster are capable of sharing resources and data with one another. In one embodiment, in order to facilitate the sharing of data, a system registry component 300 (FIG. 3) is used, which is highly available and provides access to at least one global data repository 302. In one example, system registry 300 is replicated among a plurality of nodes 304, as system registry processes 306. In one embodiment, however, the system registry is replicated on fewer than all of the nodes of a cluster. As shown in FIG. 3, Nodes 1, 2 and 3 include a system registry process 306, while Nodes 4-7 do not. Nodes 4-7 are thus, considered registry client nodes of a client-server environment, while Nodes 1-3 are considered registry server nodes of the environment, since the registry function is executed on those nodes.

The system registry subsystem, along with one or more global data repositories, are regularly accessed by the other components of the cluster architecture. Communication with a data repository is, for instance, connection oriented, since the existence of a session context between a client and a server aids in avoiding unnecessary network traffic.

In one embodiment, a registry server node 400 (FIG. 4a) stores persistent information, such as configuration data, in one or more data structures 402 (e.g., tables) of a